

Patent Claims:

1. Method of monitoring an electrohydraulic brake system for motor vehicle, with a master brake cylinder (2) operable by means of a brake pedal (1), with a travel simulator (3) cooperating with the brake pedal (1), with at least one pressure source actuatable by an electronic regulation and control unit (16) which is formed of a high-pressure accumulator (21) that can be charged by means of a pump (23), and the pressure of the pump can be applied to wheel brakes (7, 8) of the vehicle which are connectable to the master brake cylinder (2), on the other hand, by means of at least one hydraulic connection (5) that can be closed by means of a separating valve (11), with a device (33) for detecting the driver's deceleration request, and with each one inlet valve (17, 18) connected upstream of the wheel brakes (7, 8) and an outlet valve (27, 28), characterized by the following process steps:

- deactivating of an electronic control associated with the charging operation of the high-pressure accumulator and to be carried out by the electronic regulation and control unit (16);
- closing of the separating valve (11) associated with a vehicle axle,
- opening of the inlet valves (17, 18) associated with the vehicle axle for the purpose of displacing

pressure fluid volume into the wheel brakes (7, 8) of the vehicle axle, while additionally determining values (p , ΔV) representative of the hydraulic pressure introduced into the wheel brakes (7, 8) and the displacement of pressure fluid volume; and

- evaluating of the values for judging the condition of the wheel brakes (7, 8).

2. Method as claimed in claim 1, characterized in that the displacement of pressure fluid, with the high-pressure accumulator (21) charged, takes place by partly opening the inlet valves (17, 18), and in that the reduction of the pressure fluid volume contained in the high-pressure accumulator (21) is taken into consideration as an indicator of the displacement of pressure fluid.
3. Method as claimed in claim 1, characterized in that the displacement of pressure fluid into the wheel brakes, with the high-pressure accumulator discharged, takes place as a result of actuation of the pump and complete opening of the inlet valves (17, 18).
4. Method as claimed in claim 3, characterized in that the displacement of pressure fluid is approximated by numerical integration of the pump volume flow within the electronic control unit.

5. Method as claimed in claim 2 or 3,
characterized in that the values (p , ΔV) representing the hydraulic pressure and the displacement of pressure fluid volume are compared with previously defined threshold values ($p_{R\min}$, $\Delta V_{s,\max}$), and the results of the comparison are subjected to a time pressure/volume correlation.
6. Method as claimed in claim 5,
characterized in that a condition is concluded from the fact of an increase of the hydraulic pressure introduced into the wheel brakes (7, 8) in excess of the previously defined threshold value ($p_{R\min}$), during which the indicator of the displacement of pressure fluid does not reach the threshold value ($\Delta V_{s,\max}$), in which condition the friction elements of the wheel brakes (7, 8) are applied to their associated friction surfaces.
7. Method as claimed in claim 5,
characterized in that when the indicator of the displacement of pressure fluid exceeds the (volume) threshold value ($\Delta V_{s,\max}$) and the hydraulic pressure introduced into the wheel brakes (7, 8) does not reach the (pressure) threshold value ($p_{R\min}$), an inadmissible displacement travel of pistons provided in the wheel brakes (7, 8) is concluded, representing an imminent risk to the maintenance staff during maintenance works at the wheel brakes.

8. Method as claimed in claim 7,
characterized in that an optical or an
acoustic warning is issued upon detection of the
inadmissible displacement travel of the pistons.